ORIGINAL

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF GOODMAN WATER CORPORATION, FOR (i) A DETERMINATION OF THE FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND (ii) AN INCREASE IN ITS WATER RATES AND CHARGES FOR UTILITY SERVICE BASED THEREON.	**DOCKET NO: W-02500A-10-0382**

Notice of Filing

James Schoemperlen, an Intervenor, hereby provides notice of filing Surrebuttal testimony in the above referenced matter.

Respectfully Submitted this 13th day of June, 2011.

James Schoemperlen
Intervenor

An Original and Thirteen Copies
Of the foregoing filed this 13th day
Of June, 2011 with:

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SURREBUTTAL TESTIMONY OF

JAMES SCHOEMPERLEN

IN RESPONSE TO REBUTTAL TESTIMONY FROM MR THOMAS J. BOURASSA ON BEHALF OF GOODMAN WATER COMPANY

(RATE BASE, INCOME STATEMENT AND RATE DESIGN)
DATED June 13th, 2011

June 13, 2011

LISTING OF SCHEDULES

Schedule – A ..... Intervenor Projection of Actual Returns Based on Staff Adjustments

Schedule – B ..... Intervenor Projection to get 9% average Returns Based on Staff Adjustments

Schedule – C ..... Intervenor Projection of Actual Returns Based on 7.17% Beginning Cost of Capital after Staff Adjustments

Schedule – D ..... Intervenor Projection of Average 7.17% Returns Based on Staff Adjustments

Schedule – E ..... GWC Projection of Actual Returns Based on Staff Adjustments, 10% starting Cost of Capital

Schedule – F ..... GWC Projection of Actual Returns Based on Staff Adjustments - Ave 10%

Schedule – G ..... GWC Returns required to get 9% average return on investment

Schedule – H ..... ACC Projection of Actual Returns Based on Staff Adjustments

Schedule – I ..... ACC Projection of Actual Returns Based on Staff Adjustments and 9% Average Return

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Schedule – O ..... Overall Summary

Schedule – P ..... P15, American Water Works Association Manual of Water Supply Practices, Growth in Number of Customers

Q1. Please state your name, occupation and address.

A1. James Schoemperlen, Corporate Controller for Sargent Aerospace in Tucson, my home address is 39696 S. Horse Run Drive.

Q2. On whose behalf are you testifying?

A2. I am testifying on behalf of myself as an intervenor in this case.

Q3. Please describe your educational background and professional experience.

A3. I am a Certified Public Accountant; I am the Corporate Controller for Sargent in Tucson which is an Aerospace Company. I have a BBA in Accounting from the University of Wisconsin. I have a Master's of Science Management from the University of Wisconsin with concentration in Finance.

Q4. Briefly Summarize your work experience.

A4. Brief summary as follows:

As Corporate Controller for Sargent in Tucson I have prepared numerous analysis for large capital additions including a recent significant expansion for the Tucson operations and I have led our mergers and acquisitions efforts analyzing numerous potential targets , Prior to that I was a divisional controller for Walbro Engine Management in Tucson, Prior to that I was controller for Lear Corporation in Janesville Wisconsin where I participated in a major plant expansion using robotics and was successful in obtaining significant funding from the state of Wisconsin for that expansion, Prior to that I held various Controllership positions with Motorola in Chicago IL for 20 years and performed the analysis for major plant expansions both domestic and international , Prior to that I worked as an Auditor for KPMG, one of the largest audit firms in the world and had concentrated audit experience in both commercial manufacturing and health care.

Q5. What is the scope of your testimony here?

A5. I am testifying in opposition to positions taken by Mr. Bourassa in his rebuttal testimony on May 2, 2011 on behalf of Goodman Water Company (GWC).

Q6. Please summarize the areas where you have problems with positions taken by the Arizona Corporation Commission staff.

A6. I will respond mainly to each of his comments where he indicated he had problems with my previous testimony using his question and answer numbers although my silence on issues he has raised with the testimony of others should not be construed as agreement with his position. In some cases I will respond to issues he has raised with the testimony of others.

Q16/A16

Mr. Bourassa talks about Staff's reliance on the NARUC audit guidelines. Hear it is clear we are talking about an affiliate transferring land to GWC. On line 15, Mr. Bourassa states "Further, the Guidelines also state that the transfer of assets from an affiliate to the utility should be at the lower of prevailing market price or net book value, except as required by law or regulation. Mr. Bourassa states "In that regard the commission rules require that assets be recorded at the cost to the person (or company) first devoting the asset to public service. And, the cost is the cost at the time the asset is devoted to public service. He goes on to say, "It was the Company who first to (sic) devoted the land to public service and the cost to GWC is the cost it incurred to acquire the land from E.C. Development.

None of this indicates what "Commission rules for Affiliate Transactions" are. The NARUC Guidelines for affiliate transactions should be used. This means GWC needs to initially record the asset at the lower of E.C. Developments "Book Value" or the prevailing market price at the time of the transaction. The key phrase here is **WHICHEVER IS LOWER**. This then becomes GWC's cost and would be their cost at the time it is devoted to public service (i.e. the cost doesn't change, they are not allowed to increase "Cost" due to appraisal at the time it is devoted to public service. GWC

needs to give us the book value on their affiliates books (EC Development) at the time of transfer so that the appropriate rate for the land can be developed.

Q24/A24

Mr. Bourassa is answering the question "ON WHAT BASIS DO YOU CONCLUDE THAT THE CONSTRUCITON OF 340.000 GALLONS OF STORAGE CAPACITY AT WATER PLANT NO.3 WAS REASONABLE AND PRUDENT?

Page 9,Line 18 "The Company was required to make the decision in the 2006-2007 time frame, at which time the Company obviously could not have known exactly how many customers it would have in 2009.

In GWC's response to the Wawrzyniak/Schoemperlen second set of data requests question 2.15 where the following question was asked:

> **Q. Please provide a copy of all financial analysis Goodman Water Company performed for construction of additions to Goodman water plan, equipment and infrastructure.**

Mr. Shiner's response was as follows:

> **A. The Company has not prepared any "financial analysis" for construction of additions to Goodman Water Company water plant other than schedules for the costs of plan additions, depreciation schedules, and sources of funding which have been provided.**

Mr. Shiner already admitted he did not do any analysis before expansion. **How can this be prudent?**

Q25/A25

In this question/answer, Mr. Bourassa goes on to say "I do not disagree with Mr. Scott that the Company is projected to have approximately 875 customers by 2014 based upon data from 2004 to 2010. In that regard, Staff's historical practice is to evaluate a utility's capacity requirements using a five year planning horizon as measured from the end of the test period."

This is interesting since GWC has never prepared a five year analysis of the data with projections they indicate they believe in. I admit that this is extremely important, especially with a water system and customer base which is undergoing an expansion. I will put forward this type of analysis later and show that it presents some very important conclusions.

Mr. Bourassa goes on to indicate "Labeling storage capacity as "excess" implies the Company acted imprudently, which it did not. Using data from 2009 and 2010, and arguably 2008, is an after-the-fact analysis, or a form of "Monday morning quarterbacking."

I think there is a clear question regarding the "quarterbacking" that was done. As stated before, **GWC HAS ADMITTED THAT NO FINANCIAL ANALYSIS WAS PERFORMED PRIOR TO EXPANSION.** As I stated on page 21 under item g., in my original testimony the following:

"As indicated by various articles in Folder-B (i.e. Wall Street Journal etc.), the housing bubble had burst in 2006."

I think there is plenty of evidence here that GWC has acted imprudently in expansion of the waterworks.

Q26/A26

Mr. Bourassa asks and answers, "IS PLANT FOUND TO BE PRUDENTLY CONSTRUCTED ALSO USED AND USEFUL? Yes. It has been the policy of this Commission that plant investment found to be prudent is also deemed to be used and useful."

The corollary here is if construction is not prudent, it should not be found used and useful. Clearly had GWC preformed financial analysis and properly examined the evidence of the housing bubble bursting available in 2006, a prudent decision would have been not to expand. GWC was imprudent in **not even performing the analysis as they admit**.

The next question is, given that there clearly is imprudent expansion, how do we determine what portion of the investment is imprudent? How do other businesses do it? Companies who are not regulated monopolies size their assets to service the market appropriately and charge their customers a market (or fair) rate accordingly. In the Airline industry they do not put a Boeing 777-300 with a capacity of 550 passengers on flights between Tucson and Phoenix. No they put jets similar to the Canada Regional Jet 200 with 50 seats. Obviously customers flying between Tucson and Phoenix would be in the range of 50 passengers and these passengers would not be willing to subsidize the cost of flying a 777-300. Is the 777-300 used and useful if it was there, well it would be functional but it would not be used and useful because customers have a choice (something not available in a monopoly). They will only pay a fair fare! Likewise, it would be inappropriate to consider something used and useful just because it is connected to the system for a water company. There should be similar questions for the water company to make sure the customers of a monopoly pay a fair fare! The most logical way to do this is evaluate capacity and percentage of capacity used. I will present analysis later that does just that.

Q33/A33

Mr. Bourassa asks and answers, "WHY DOES RUCO CONCLUDE THERE IS EXCESS CAPACITY? RUCO believe the Company over-anticipated GWC's build-out date and constructed plant to serve the projected build out. However, Mr. Coley's analysis is an after-the-fact analysis". I would conclude that RUCO is correct and note that what led to the problem is that GWC did no "BEFORE-THE-FACT analysis **and that's how they had acted imprudently!** As indicated previously, there was ample evidence in the market that it was imprudent to expand as early as 2006.

Q35/A35

Mr. Bourassa asks and answers in part "...Doesn't the construction of utility plant typically require significant lead times....Yes, ... the utility would have to start planning, engineering and permitting the new storage tank 1-2 years before the storage capacity is needed."

Again, there was sufficient evidence in the market that the housing bubble was bursting as early as 2006 and again, GWC admits they did no analysis.

Q47-48/A47-48

Mr. Bourassa correctly indicates that I did not split costs appropriately for AIAC and the phases. Previously I did not have the information necessary to do the split out and I thank Mr. Bourassa for providing that information. I have corrected that in the information presented below and in all the schedules attached.

Calculation of Returns based on Mr. Bourassa corrections for AIAC

Schedule – A summary, Actual Average Return at 9% on Rate base (see actual complete Schedule A attached for complete details.

(Note that Summary Schedules show results only. For detail, go to Schedules)

Schedule A summary information summarized below is this intervenors calculation of the 5 year returns based on beginning customers of 621 and ending with customers of 875 as projected by ACC staff and agreed to by Mr. Bourassa as indicated previously. As indicated earlier, GWC through Mr. Bourassa indicates that it is proper to forecast forward expected customers and this intervenor agrees.

Other major assumptions include:

- To calculate excess capacity, I have used the detail in schedule N, Goodman Water Company Capacity Used (there was a small correction in the calculation which moved unused capacity of plant added in phase IV, V, Future Phase and Unplanned Capacity to down to 85% from 85.8%). It should be noted that I now am allowing a 10% deduction for reserve capacity in the calculations per Mr. Bourassa's objection in Q46/A46.
- I used Schedule M for the Excess Capacity adjustments pursuant to additional information received from Mr. Bourassa. See Schedule M for detail. It should be noted that in Schedule A, I am adjusting both the Rate Base excess capacity and related depreciation for additional capacity required as users are added back in to get to the 875 users at the end of 2014.

- Growth in customers over the rate period are assumed to be linear.
- In my calculations later, I use RUCO's method of calculating the Equity Return Requirement since it gets around the biased results achieved with the GWC analysis and with the exception that I average the returns and add 50 bps to come up with an Equity return requirement of 8.02%, which is a full 194 bps above yield on a Baa/BBB-rated utility bond. As indicated by recent fall stock market trends and the flagging housing market, it appears that recovery and meaningful increases in employment may be a long time in coming, this is a very generous return. I also use the 40% debt equity split and available WIFA rates for debt to come up with an overall return requirement of 7.17%. **Below I use overall capital rate of 9% however to show what happens if we use ACC Staff overall calculation of cost of Capital and based the starting return on 9%.** See detail on Schedule – L.
- Same assumptions as ACC staff for Property Taxes, Wages (which I still think are too high), Purchased Power, Repairs and Maintenance, Office Supplies and Outside consulting.
- I have not added in the additional $40k in expense that GWC feels they are incurring in defense of this case. I feel that adjustment is arbitrary and unsupported.

Results and conclusions:

Goodman Water Co						
Intervenor Projection of Actual Returns Based on Staff Adjustments						
Required Rate Decrease Calculated		2.42%				
Schedule - A		YEAR				
Actual Average Return at 9% on Rate Base		1	2	3	4	5
		12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014
	Revenue	562,506	602,362	644,935	691,131	792,581
	Base Revenue at 621 customers per Adj Test Yr.	576,464				
	Total Cost**	443,955	466,305	492,010	520,473	582,978
	Net Operating Income - After Taxes (Before Interest	118,552	136,057	152,924	170,658	209,603
	Net Rate Base*	1,317,239	1,355,198	1,433,703	1,556,205	1,775,328
	Total Customers	621	665	712	763	875
	Average Revenue per Customer	905.81	905.81	905.81	905.81	905.81
	Return on Rate Base	9.0%	10.0%	10.7%	11.0%	11.8%
	∑ of Returns	787,794				
	Average Annual Return	10.6%				
	Unused Capacity	670	626	579	528	416
	Base Addition		37,958	78,505	122,502	219,124
	Depreciation Addition		1,758	3,636	5,674	10,150

Conclusions:

1. The calculations show that if we **start with** a 9% return on the adjusted rate base, the **average** return to GWC over the rate period will balloon to **11.8% (Clearly a return not intended)** and at that rate a **decrease** in revenue from base revenue in test year would be required of **2.42%.**

Schedule – B summary, Intervenor Projection to get 9% average Returns Based on Staff Adjustments

Schedule B summary information summarized below shows what happens to the rates as compared to current rates if we adjust the returns to get a 9% **average return** over the projection period. **What we clearly should be talking about is average returns and not returns in year one due to the effects of addition of customers over the rate period. As we can see, there are significant inequities (i.e. GWC earns a 10.6% return in schedule a above and**

not the 9% return intended) if we do not focus on average return over the rate period. (Other assumptions the same as above.)

Goodman Water Co						
Intervenor Projection to get 9% average Returns Based on Staff Adjustments						
Required Rate Decrease Calculated	8%					
Schedule - B	YEAR					
Initial Return to get 9% Average	1	2	3	4	5	
	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	
Revenue	532,362	570,082	610,374	654,094	750,108	
Base Revenue at 621 customers per Adj Test Yr.	576,464					
Total Cost**	436,204	455,241	477,855	504,454	564,608	
Net Operating Income - After Taxes (Before Interest	96,158	114,841	132,519	149,641	185,501	
Net Rate Base*	1,317,239	1,355,198	1,433,703	1,556,205	1,775,328	
Total Customers	621	665	712	763	875	
Average Revenue per Customer	857.27	857.27	857.27	857.27	857.27	
Return on Rate Base	7.3%	8.5%	9.2%	9.6%	10.4%	
∑ of Returns	678,659					
Average Annual Return	9%					
Unused Capacity	670	626	579	528	416	
Base Addition		37,958	78,505	122,502	219,124	
Depreciation Addition		1,758	3,636	5,674	10,150	

Conclusions:

1. **If we focus on making sure the 9% return is the average return over the projection return and not the starting return**, based on my assumptions above this leads to a **8% decline** in current rates.

Schedule – C summary, Intervenor Projection of Actual Returns Based on 7.17% Beginning Cost of Capital after Staff Adjustments

Schedule C summary information summarized below shows what happens to the revenue rates required as compared to current rates if we adjust the returns to get a 7.17% starting return (My calculation of return required). All other assumptions are the same as examples above.

Goodman Water Co						
Intervenor Projection of Actual Returns Based on 7.17% Beginning Cost of Capital after Staff Adjustments						
Required Rate Decrease Calculated		8%				
Schedule - C		YEAR				
Average Return at 7.17% with adjusted rate base		1	2	3	4	5
		12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014
	Revenue	530,197	567,763	607,891	651,434	747,057
	Base Revenue at 621 customers per Adj Test Yr.	576,464				
	Total Cost**	435,751	454,541	476,896	503,303	563,288
	Net Operating Income - After Taxes (Before Interest)	94,446	113,223	130,995	148,131	183,769
	Net Rate Base*	1,317,239	1,355,198	1,433,703	1,556,205	1,775,328
	Total Customers	621	665	712	763	875
	Average Revenue per Customer	853.78	853.78	853.78	853.78	853.78
	Return on Rate Base	7.17%	8.4%	9.1%	9.5%	10.4%
	∑ of Returns	670,563				
	Average Annual Return	9.02%				
	Unused Capacity	670	626	579	528	416
	Base Addition		37,958	78,505	122,502	219,124
	Depreciation Addition		1,758	3,636	5,674	10,150

Conclusions:

1. My required return on rate base requires a 8% decrease in rates and generates an average return for GWC of 9.02% over the period.

Schedule – summary, Intervenor Projection of Average 7.17% Returns Based on Staff Adjustments

Schedule D summary information summarized below shows that if we are trying to achieve a 7.17% average return based on my calculations of required returns we would actually need a 13% decrease in current rates.

Goodman Water Co						
Intervenor Projection of Average 7.17% Returns Based on Staff Adjustments						
Required Rate Decrease Calculated	14%					
Schedule - D	YEAR					
Average Return at 7.17% with adjusted rate base	1	2	3	4	5	
	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	
Revenue	498,047	533,335	571,030	611,932	701,757	
Base Revenue at 621 customers per Adj Test Yr.	576,464					
Total Cost**	429,024	446,604	465,383	487,930	543,695	
Net Operating Income - After Taxes (Before Interest)	69,023	86,731	105,647	124,002	158,062	
Net Rate Base*	1,317,239	1,355,198	1,433,703	1,556,205	1,775,328	
Total Customers	621	665	712	763	875	
Average Revenue per Customer	802.01	802.01	802.01	802.01	802.01	
Return on Rate Base	5.24%	6.4%	7.4%	8.0%	8.9%	
∑ of Returns	543,466					
Average Annual Return	7.31%					
Unused Capacity	670	626	579	528	416	
Base Addition		37,958	78,505	122,502	219,124	
Depreciation Addition		1,758	3,636	5,674	10,150	

Conclusions:

1. My required return on rate base requires a 14% decrease in rates and generates an average return for GWC of 7.17% over the period.

Schedule – E summary, Shows what happens if GWC gets their request of 10% return on an unadjusted rate base of $2,402,221 over the build out period.

Goodman Water Co						
GWC Projection of Actual Returns Based on Staff Adjustments, 10% starting Cost of Capital						
Required Rate Increase Calculated		**49%**				
Schedule - E		**YEAR**				
		1	2	3	4	5
		12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014
	Revenue	857,176	917,910	982,785	1,053,181	1,207,776
	Base Revenue at 621 customers per Adj Test Yr.	**576,464**				
	Total Cost**	626,700	659,231	691,677	726,883	804,200
	Net Operating Income - After Taxes (Before Interest)	230,476	258,678	291,108	326,297	403,576
	Net Rate Base*	2,402,221	2,402,221	2,402,221	2,402,221	2,402,221
	RATE BASE PER GWC					
0.10	Total Customers	621	665	712	763	875
	Average Revenue per Customer	1,380.32	1,380.32	1,380.32	1,380.32	1,380.32
	Return on Rate Base	10%	10.8%	12.1%	13.6%	16.8%
	∑ of Returns	1,510,136				
	Average Annual Return	13%				
	Unused Capacity	670	626	579	528	416
	Base Addition					
	Depreciation Addition					

Conclusions:

1. Return over the period assuming no rate base reductions (clearly there are some) would be 13% and require a revenue increase of 49%. Ending return of 16.8% which would continue into future years assuming no rate change review and no further customer growth. Clearly there would be future customer growth. **THESE ARE RETURNS THAT ARE UNJUSTLY HIGH AND UNREASONABLE.**

Schedule – F summary, Shows what happens if GWC gets their request of 10% AVERAGE return on an unadjusted rate base of $2,298,376 over the build out period.

Goodman Water Co						
GWC Projection of Actual Returns Based on Staff Adjustments - Ave 10%						
Required Rate Increase Calculated	33%					
Schedule - F	YEAR					
	1	2	3	4	5	
	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	
Revenue	768,522	822,974	881,140	944,255	1,082,861	
Base Revenue at 621 customers per Adj Test Yr.	**576,464**					
Total Cost**	588,355	618,313	650,313	684,838	755,982	
Net Operating Income - After Taxes (Before Interest)	180,167	204,662	230,827	259,417	326,879	
Net Rate Base*	2,402,221	2,402,221	2,402,221	2,402,221	2,402,221	
RATE BASE PER GWC						
Total Customers	621	665	712	763	875	
Average Revenue per Customer	1,237.56	1,237.56	1,237.56	1,237.56	1,237.56	
Return on Rate Base	7.5%	8.5%	9.6%	10.8%	13.6%	
∑ of Returns	1,201,951					
Average Annual Return	10.0%					
Unused Capacity	670	626	579	528	416	
Base Addition						
Depreciation Addition						

Conclusions:

1. To get an average return of 10%, we would need to start with a return of 7.5%. The average return on the unadjusted rate base of 10% would require a 31% increase in revenue AND THEY WOULD BE EARNING 13.6% which would continue into future years assuming no rate change review and no further customer growth. Clearly there would be future customer growth. **THESE ARE RETURNS THAT ARE UNJUSTLY HIGH AND UNREASONABLE.**

Schedule – G summary, Shows what happens if GWC return on unadjusted rate base is limited to 9% average over the rate period. Here required rates would have to be increased by 27%.

Goodman Water Co						
GWC Returns required to get 9% average return on investment						
Required Rate Increase Calculated	**27%**					
Schedule - G	**YEAR**					
	1	2	3	4	5	
	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	
Revenue	734,234	786,257	841,827	902,126	1,034,548	
Base Revenue at 621 customers per Adj Test Yr.	**576,464**					
Total Cost**	573,525	602,432	633,309	666,815	737,334	
Net Operating Income - After Taxes (Before Interest)	160,709	183,825	208,517	235,311	297,215	
Net Rate Base*	2,402,221	2,402,221	2,402,221	2,402,221	2,402,221	
RATE BASE PER GWC						
Total Customers	621	665	712	763	875	
Average Revenue per Customer	1,182.34	1,182.34	1,182.34	1,182.34	1,182.34	
Return on Rate Base	6.7%	7.7%	8.7%	9.8%	12.4%	
∑ of Returns	1,085,577					
Average Annual Return	9%					
Unused Capacity	670	626	579	528	416	
Base Addition						
Depreciation Addition						

Conclusions:

1. To get an average return of 9%, we would need to start with a return of 6.7%. The average return on the unadjusted rate base of 9% would require a 25% increase in revenue. At the end of the period GWC would be earning at the 12.4% rate which would continue into future years assuming no rate change review and no further customer growth. Clearly there would be future customer growth. **THESE ARE RETURNS THAT ARE UNJUSTLY HIGH AND UNREASONABLE.**

Schedule – H summary, Shows what happens if ACC return on adjusted rate base is adjusted to get the $700,936 in revenue requested in year one. Here the average return would be 11% over the rate period and require a 22% rate increase.

Goodman Water Co						
ACC Projection of Actual Returns Based on Staff Adjustments						
Required Rate Increase Calculated	22%					
Schedule - H	YEAR					
	1	2	3	4	5	
	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	
Revenue	700,936	750,600	803,650	861,214	987,631	
Base Revenue at 621 customers per Adj Test Yr.	576,464					
Total Cost**	559,123	587,010	616,797	649,120	719,223	
Net Operating Income - After Taxes (Before Interest)	141,813	163,590	186,852	212,095	268,408	
Net Rate Base*	1,739,712	1,739,712	1,739,712	1,739,712	1,739,712	
Total Customers	621	665	712	763	875	
Average Revenue per Customer	1,128.72	1,128.72	1,128.72	1,128.72	1,128.72	
Return on Rate Base	8.2%	9.4%	10.7%	12.2%	15.4%	
∑ of Returns	972,757					
Average Annual Return	11%					
Unused Capacity	670	626	579	528	416	
Base Addition						
Depreciation Addition						

Conclusions:

1. Revenue request generates an average return of 11%, we would need to start with a return of 8.2% and this would generate a rate increase of 22%.

Schedule – I summary, Shows what happens if ACC return on adjusted rate base is adjusted to get an average rate return of 9% over the period on a rate base of $1,739,712.

Goodman Water Co
ACC Projection of Actual Returns Based on Staff Adjustments and 9% Average Return
Required Rate Increase Calculated **10%**

Schedule - I	YEAR				
	1	2	3	4	5
	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014
Revenue	636,188	681,264	729,414	781,661	896,400
Base Revenue at 621 customers per Adj Test Yr.	**576,464**				
Total Cost**	531,805	557,021	584,689	614,712	680,644
Net Operating Income - After Taxes (Before Interest)	104,383	124,243	144,725	166,949	215,756
Net Rate Base*	1,739,712	1,739,712	1,739,712	1,739,712	1,739,712
Total Customers	621	665	712	763	875
Average Revenue per Customer	1,024.46	1,024.46	1,024.46	1,024.46	1,024.46
Return on Rate Base	6.0%	7.1%	8.3%	9.6%	12.4%
∑ of Returns	756,057				
Average Annual Return	9%				
Unused Capacity	670	626	579	528	416
Base Addition					
Depreciation Addition					

Conclusions:

1. Revenue request generates an average return of 9%, we would need to start with a return of 6% and this would generate a rate increase of 10%.

Schedule – J summary, Shows what happens if RUCO return on adjusted rate base starts at 7.85% on an adjusted rate base of $1,729,190. Here the average return is 10% over the period and would require a 6% reduction in required revenue compared to the Revenue base in the adjusted test year.

Goodman Water Co
RUCCO Projection of Actual Returns Based on RUCCO Adjustments and 7.85% cost of Capital
Required Rate Increase Calculated **-6%**
Schedule - J

	YEAR				
	1	2	3	4	5
	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014
Revenue	544,111	582,663	623,844	668,529	766,662
Base Revenue at 621 customers per Adj Test Yr.	**576,464**				
Total Cost**	408,357	431,230	455,663	482,175	540,397
Net Operating Income - After Taxes (Before Interest)	135,754	151,433	168,181	186,355	226,266
Net Rate Base*	1,729,190	1,729,190	1,729,190	1,729,190	1,729,190
Total Customers	621	665	712	763	875
Average Revenue per Customer	876.19	876.19	876.19	876.19	876.19
Return on Rate Base	7.85%	8.8%	9.7%	10.8%	13.1%
∑ of Returns	867,988				
Average Annual Return	10%				
Unused Capacity	670	626	579	528	416
Base Addition					
Depreciation Addition					

Conclusions:

1. If we start with the RUCO return on Rate Base requested in year one of 7.85% on the adjusted rate base of $1,729,190 the average return over the period is 10%. Adoption of this would require a 6% reduction in revenue as calculated for the adjusted test year.

Schedule – K summary, Shows what happens if RUCO return on adjusted rate base is adjusted to get a 7.85% AVERAGE on an adjusted rate base of $1,729,190. Here the average return is 7.85% over the period and would require a 15% reduction in required revenue compared to the Revenue base in the adjusted test year.

Goodman Water Co
RUCCO Projection of Actual Returns Based on Average 7.85% Return
Required Rate Increase Calculated **-15%**

Schedule - K	YEAR				
	1	2	3	4	5
	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014
Revenue	487,650	522,201	559,109	599,157	687,107
Base Revenue at 621 customers per Adj Test Yr.	**576,464**				
Total Cost**	385,454	405,326	427,664	452,170	505,988
Net Operating Income - After Taxes (Before Interest)	102,195	116,875	131,445	146,987	181,119
Net Rate Base*	1,729,190	1,729,190	1,729,190	1,729,190	1,729,190
Total Customers	621	665	712	763	875
Average Revenue per Customer	785.26	785.26	785.26	785.26	785.26
Return on Rate Base	5.91%	6.8%	7.6%	8.5%	10.5%
∑ of Returns	678,622				
Average Annual Return	7.85%				
Unused Capacity	670	626	579	528	416
Base Addition					
Depreciation Addition					

Conclusions:

1. If we start with the RUCO return on Rate Base requested in year one of 5.91% on the adjusted rate base of $1,729,190 in year one, the average return over the period is 7.85% and results in a reduction of income over adjusted test year of 15%

Discussion of Appropriate Methods and summary conclusions:

When we talk about returns, it is important to understand exactly what we mean by those returns, particularly when we are dealing with a water company that has an expanding customer base. We have already established that one of the things that must be forecasted is customer growth. This is also validated as indicated on page 15 of the American Water Works Association manual of Water Supply Practices –M1, under Growth in Customers, "Growth in the number of customers

served can be projected by recognizing historical growth patterns, growth restrictions, and changes in economic conditions, and by being aware of proposed developments in the service area". (See Schedule – P page P15 of the American Water Works Association Manual of Water Supply Practices, Growth in Number of Customers attached).

Obviously, if we are proposing a 10% return on rate base and that 10% is applied to a water company with AN EXPANDING CUSTOMER BASE in year one, by the end of the rate period that water company could be earning 18% with an average return over the period of 13%. Is this what is intended? I think this would result in Unfair and Unjust rate practices. I believe the intention is to develop reasonable rates of return over the rate period. Just as GWC has forecasted all kinds of expenses over the period so too do they need to forecast growth in customer base. As we know, ACC Staff has provided a forecast and GWC has agreed to that forecast.

Following is a summary of where each of the parties to this rate request stand based on Average Returns over the rate period.

Goodman Water Co
Intervenor Projection of Actual Returns Based on based on Average over the rate period
Schedule - O

	Rate Requestor / Intervenor	Rate Base Year 1	Rate Base Year 5 (2014)	Starting Return on Rate Base	Ending Return on Rate Base	Average Return	Test Year Revenue Increase (Decrease) %	
	Goodman Water Co. @ Current Request	2,402,221	2,402,221	10%	17%	13%	49%	Rate Base Issues, Intergenerational Inequity Issues, Average Rate Issues
1.)	Intervenor Schoemperlen @ 9% Yr-1 Return	1,317,239	1,775,328	9%	12%	11%	-2%	Rate base varies to solve intergenerational rate issue. Ending rate base is above both ACC and RUCO. Average Return Issues.
	Goodman Water Co. @ 10% Average Return	2,402,221	2,402,221	8%	14%	10%	33%	Rate Base Issues, Intergenerational Inequity Issues,
2.)	Intervenor RUCCO at 7.85% Starting Return	1,729,190	1,729,190	8%	13%	10%	-6%	Rate base resolved, Intergenerational Inequity Issues, Average Rate Issues
	Goodman Water Co. @ 9% Average Return	2,402,221	2,402,221	7%	12%	9%	27%	Rate Base Issues, Intergenerational Inequity Issues, Average Rate Resolved
3.)	Goodman Water Co. @ 9% Average Return ACC RATE BASE	1,739,712	1,739,712	7%	13%	9%	14%	Rate Base Resolved, Intergenerational Inequity Issues, Average Return @9%. Return on rate base issue.
4.)	ACC @ 9% Average Return	1,739,712	1,739,712	6%	12%	9%	10%	Issues, Average Return @9%. Return on rate base issue.
5.)	Intervenor Schoemperlen @ 9% Average Return	1,317,239	1,775,328	7%	10%	9%	-8%	issue. Ending rate base is above both ACC and RUCO. Average Return Issue @9%. Return on rate base issue.
6.)	Intervenor RUCCO at 7.85% Average Return	1,729,190	1,729,190	6%	10%	7.85%	-15%	Rate Base Resolved, Intergenartional Inequity Issues, Return on rate base resolved.
7.)	Intervenor Schoemperlen @ 7.17% Average Return	1,317,239	1,775,328	5%	9%	7%	-14%	Rate base varies to solve intergenerational rate issue. Ending rate base is above both ACC and RUCO. Return at Equity Rate calculated resolved. Return on rate resolved.

RED NUMBERS GWC AT THEIR REQUESTED RATE BASE

Ref# above	Conclusions:
1.)	**Intervenor Schoemperlen with return on rate base set for 9% for gear one, rate base set to solve intergenerational rate issue. Rate base at end of rate period is higher than both RUCO and ACC. Average return to GVC is 11%, results in 2% reduction in test gear revenue. Average return is above 9%.**
2.)	**Intervenor RUCO @7.85% Year - 1 return on on rate base shows a 6% reduction in test gear revenue. Average return to GVC would be 10% over rate period. Average return above 9%.**
3.)	**GVC at ACC rate base with 9% average return would show a 14% increase in revenue requirement from Base. Intergenerational rate issue not resolved.**
4.)	**ACC calulations at a 9% AVERAGE RETURN over rate period would require a 10% increase in base period revenue. Does not resolve intergenerational rate inequity issue.**
5.)	**Intervenor Schoemperlen @9% Average Return over the period would result in a 8% reduction in test gear revenue**
6.)	**Intervenor RUCO @7.85% Average Return results in 15% reduction in test gear revenue. Still have intergenerational rate inequity issue.**
7.)	**Intervenor Schoemperlen with AVERAGE return set at required calculated return. Intergenerational rate inequity resolved.**

Please note that the summary shows each of the options sorted from High to Low based on average returns. #7 above shows Intervenor Schoemperlen, achieving average return on rate base per the cost of capital calculations with a sliding rate base to get around the intergenerational rate inequity issue. This shows a downward adjustment in test year revenue of 14%. Another important calculation is #5 above which shows what happens if a 9% average return is allowed on

sliding rate base to resolve the intergenerational rate inequity issue. This one assumes the ACC Staff debt/equity mix and cost of capital calculations and shows an 8% reduction in rates from test year revenues. Also important is the Intervenor RUCO #2, which shows the effect on their rate base which is similar to ACC Staff rate base at their calculated cost of capital at 7.85% in year 1. Here the adjustment to test year revenue is a 6% reduction. Finally, #4 ACC Staff calculations at a 9% average cost of capital show an increase of 10% in Test year revenue. What should be noted though is that GWC will be earning **12% at the end of the rate period** and there is still a significant intergenerational rate inequity issue.

One thing that should be noted is that my numbers start with a rate base that is applicable to customers in year 1 and builds each year proportionally as customers are added as indicated in schedules M&N.

Q44/A44

To answer Mr. Bourassa's question on unplanned capacity, if we look at information on Table-2 "Adjustment for Excess Capacity" we can see that the GWC lot summary information only goes up to lot 957 (lot 961 after correction for GWC error in double count). As previously indicated by Mr. Mark Taylor of Westland resources the water works were built out to 1,291 units (See p19 of my original testimony). Since the difference between the 1,291 and the 961 units (370) does not appear on the planned housing map, I can only assume it is "Unplanned Capacity".

Q45/A45

Mr. Bourassa indicates that Mr. Scott finds that 50 percent of the 530,000 gallon storage tank is used and useful. The corollary to that is that 50% is not used and useful, I will remove all of that later in my current analysis consistent with what ACC Staff has done. By way of information, Mr. Scott disallowed the 50% deduction since as Mr. Shiner indicates, it was erroneously included in the

calculations since that upsized tank was part of the planning for ECR-West (this is the new planned subdivision West of Oracle road which did not materialize (see A27, line 14, page 13 of Mr. Shiners rebuttal testimony. One wonders what other items GWC erroneous included in these calculations). ECR-West was designed for 420 residential lots and about 27 acres of commercial development. This is no doubt how Mr. M. Olea, Director Utilities division and Mr. Marlin Scott, Jr. concluded that the ECR water works was built out for 1,800 customers.

Mr. Bourassa is correct that my approach to excess capacity is different from that of Mr. Scott. Mr. Scott assumes that if a piece of equipment is connected to the system and delivering service, the entire item is considered used and useful. There is no consideration given to the capacity the system was designed for and the corresponding cost. Obviously, if you're going to design a system for 105 housing units (the total number of housing units in Phase IV-B, IV-C, Future Phase and Unplanned Capacity are 741 units, 105 is the portion currently built out see Table -2 Adjustment for Excess Capacity) that design is going to be a lot different than something designed for 741 housing units. since 105 housing units is what was connected, 105/741 = 14.2% used or 85.8% unused or excess capacity. We need a fair way to scale the portion of the expenditure used and useful to the current rate payers. The only fair way to do that is through the proportion analysis I have used. If we don't do this, there will be significant intergenerational rate inequity (i.e. current users paying for future users capacity requirements).

Q46/A46

Mr. Bourassa states in part, "...Mr. Schoemperlen appears to have no accommodation of reserve capacity necessary for customer growth". Mr. Bourassa failed to recognize that I did not attempt to adjust for the build out excess capacity between 1,800 Units and 1,291 units (1,800-1,291=509, 509/1,800 = 28.2%, see appendix - A, ACC 1800 Units.Pdf attached). Where elsewhere in the analysis respondents are using 10% for reserve, I have built in 28.2%. In the calculations I have presented above however I re-calculated to do a more direct adjustment although I believe it is excessively generous to GWC.

Other General comments on Mr. Bourassa Rebuttal

1. P213, P50 of Mr. Bourassa Cost of Capital calculation, Q68/ A68. Mr. Bourassa needs to understand that we are asking him to change his equity structure. The actual return is 9% as follows:

```
          Clear
      1,729,190 x
            0.6 =
--------------------
      1,037,514 *

          0 items

         93,378 ÷
      1,037,514 =
--------------------
0.090001677085803 *
```

Equity should be reduced, debt should be increased. Rate payers should not have to pay for GWC inappropriate capital structure. I am surprised that Mr. Bourassa does not understand what is going on here, these are basic finance principals.

2. P214, P51 of Mr. Bourassa. Q70 / A70 line 5. All Mr. Bourassa's adjustments indicate he hasn't properly adjusted for "Less Debt" if the calculations above get to a lower total cost of capital.

3. P217, Line 16, Q74, A74 Mr. Bourassa questions will Goodman Water have sufficient earnings to pay dividends.... In his calculations, he does not adjust the equity capital down. It would be GWC's choice if they don't want to do an equity buyback but they should operate with an efficient capital structure.

4. P225, Q85, A85. line 1, WIFA loans were not pursed. A lot of other utilities can deal with the restrictions, why can't GWC.

5. P225 Q87, A87. They don't site any credible debt proposals from other companies. Debt rates were lower. Who advised company that premium of 150 to 200 basis points were required?

6. P234 Q98 A98, debt structure. As Mr. Bourassa indicated in his previous testimony, the stocks in his sample had a debt / equity structure of about 50/50 debt vs. equity.
7. P236 Q100/A100, Mr. Bourassa says his calculations show that the rate is confiscatory but this is because he hasn't made the debt for equity adjustment suggested. Later he goes over a number of calculations where he is trying to prove the same thing but again has not made the adjustment.

8. P237 & 238 Q103/A103, Q104/A104. All of these calculations are pure fiction. Mr. Bourassa should realize that he needs to reduce equity.

   Q12 / A12, Mr. Shiner indicates all the things that need to be considered but as we documented previously GWC has indicated no financial analysis was done before beginning a phase. Also indicated previously, there was ample evidence that the housing bubble had burst in 2006. Q22/A22 Mr. Shiner indicated it was 2008 when the housing market stated collapsing. As I stated on page 21 under item g., in my original testimony the following:

   "As indicated by various articles in Folder-B (i.e. Wall Street Journal etc.), the housing bubble had burst in 2006."

9. Q28 A28, Mr. Shiner states that GWC originally included the cost of ECR-West. One wonders what else was included that shouldn't have been?

10. Q44/A44, Mr. Bourassa is questioning what "Unplanned Capacity" is. To answer Mr. Bourassa's question on unplanned capacity, if we look at information on Schedule-N "Adjustment for Excess Capacity" we can see that the GWC lot summary information only goes up to lot 957 (lot 961 after correction for GWC error in double count). As previously indicated by Mr. Mark Taylor of Westland resources the water works were built out to

1,291 units (See p19 of my original testimony). Since the difference between the 1,291 and the 961 units (370) does not appear on the planned housing map, I can only assume it is "Unplanned Capacity".

11. P174, P11 of Mr. Bourassa Cost of Capital calculation.Q18/A18, Line 4. Mr. Bourassa seems not to understand a weighted cost of capital approach due to the debt / equity mix. Here he indicates that return on equity is 5.87% while cost of capital is 8%. Again, this is only happening because he hasn't adjusted to the 60% equity, 40% debt. He then describes the debt/equity split as "Results Oriented". Mr. Bourassa is totally ignoring that his sample stocks had a 50% split between debt and equity. We have been generous here by only using a 60% / 40% split. The approach is not "Results Oriented" at all.

12. Q95/A95, Mr. Bourassa questions how I arrived at the 8% cost of equity capital and then answers his own question by pointing out that I used his calculations (which he threw out because it was showing returns of 7% to 7.4% - that would be a "Results Oriented Approach"). I used his calculations previously since he made no effort to include those results in calculation of his cost of equity. Again, I strenuously object to the sample that Mr. Bourassa has used since we have already proved that this sample outperforms the entire Dow Jones U.S. Water Utility Index for the last 5 years (See Chart B in my original Direct Testimony). Regardless of all the numerous calculations he makes and endless attempts to justify different ways of performing cost of equity calculations he has a basic underlying flaw that none of that can cure. That flaw is that the **SAMPLE IS BIASED**. A stock sample purported to produce unbiased results cannot start with a sample of stocks that out-perform the entire stock index he is trying to measure. This should have been one of the first things he checked. He indicates that ACC has accepted this in the past but in the past the sample may have been representative of the market. We will never get rates representative of the market this way. There's a good euphemism that applies here, "Garbage in – Garbage out". Even Mr. Bourassa indicates in at least three places in his original testimony that rates from the sample selected are not good comparisons to GWC's rates (see Mr. Bourassa testimony, Q6/A6 line 25-26, Q22/A22, Q29/A29).

Enough with Mr. Bourassa's calculations and endless attempts at justification. Since he doesn't like my approach, I have tried another.

Upon review of RUCO's method of calculations and UNBIASED SELECTION OF STOCKS, I believe they have performed a good straight forward and analysis of the cost of equity capital and I agree with their analysis. For my calculations, there is no value in recreating yet another set of calculations and I therefore use RUCO's method of calculating the Equity Return Requirement since it gets around the biased results achieved with the GWC analysis and with the exception that I average the returns and add 50 bps to come up with an Equity return requirement of 8.02%, which is a full 194 bps above yield on a Baa/BBB-rated utility bond. As indicated by recent vacillating stock market trends and the flagging housing market, it appears that recovery and meaningful increases in employment may be a long time in coming, and therefore this is a very generous return. See schedule L, re-calculation of cost of Equity.

Following are the Detail Schedules of the Summaries above which contain all the calculations.

Goodman Water Co
Intervenor Projection of Actual Returns Based on Staff Adjustments
Required Rate Decrease Calculated 2.42%

Schedule - A

Actual Average Return at 9% on Rate Base

	YEAR				
	1	2	3	4	5
	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014
Revenue	562,506	602,362	644,935	691,131	792,581
Base Revenue at 621 customers per Adj Test Yr.	**576,464**				
Total Cost**	443,955	466,305	492,010	520,473	582,978
Net Operating Income - After Taxes (Before Interest)	118,552	136,057	152,924	170,658	209,603
Net Rate Base*	1,317,239	1,355,198	1,433,703	1,556,205	1,775,328
Total Customers	621	665	712	763	875 [(a)]
Average Revenue per Customer	905.81	905.81	905.81	905.81	905.81
Return on Rate Base	9.0%	10.0%	10.7%	11.0%	11.8%
∑ of Returns	787,794				
Average Annual Return	10.6%				
Unused Capacity	670	626	579	528	416
Base Addition		37,958	78,505	122,502	219,124
Depreciation Addition		1,758	3,636	5,674	10,150

7.10%

1,291 Total Capacity per Engineer
578,003 Total excess capacity Rate Base remov
26,774 Total Depreciation Removed for Excess

	Cost of Cap Adj. Excess Capacity
Revised Required Operating Income	$ 118,551.53
Operating Expenses	$ 244,143.00
Taxes	$ 15,935.27
Depreciation	$ 183,876.32
Operating Revenue	$ 562,506.12

Operating Expenses (Before Taxes & Interest)	$ 440,913.84	$ 454,687.53	$ 469,633.44	$ 502,455.85	
Interest Expense	$ 65,227.78	$ 65,227.78	$ 65,227.78	$ 65,227.78	$ 65,227.78
Income Before Taxes	$ 69,259.02	96,220.01	125,019.25	156,269.48	224,897.46
State Tax Expense	$ 4,827.35	$ 6,706.53	$ 8,713.84	$ 10,891.98	$ 15,675.35
Pre Tax Federal Income	$ 64,431.66	$ 89,513.47	$ 116,305.40	$ 145,377.50	$ 209,222.11
Federal Taxes	$ 11,107.92	$ 18,684.58	$ 28,609.11	$ 39,947.23	$ 64,846.62

• Plant and Equipment supports 825 customers
** Assume total cost per GWC Test Year Adjust w/ adjust for reasonable Prop tax and Wages, Fixed / Variable per below
[(a)] Required Compound Growth Rate in Customers to get from 621 to 872 by 2014

			Fixed	Variable
Fixed	Salaries and Wages	$ 40,000.00	$ 40,000.00	
	Purchase Water			
Variable	Purchased Power	$ 27,066.00		$ 27,066.00
	Chemicals			
Variable	Repairs and Maintenance	$ 7,746.00		$ 7,746.00
Variable	Office Supplies and Expanse	$ 14,855.00		$ 14,855.00
Variable	Outside Services	$ 102,925.00		$ 102,925.00
Variable	Water Testing	$ 1,215.00		$ 1,215.00
	Rents			
	Transportation Expenses			
Fixed	Insurance - General Liability	$ 9,669.00	$ 9,669.00	
	Insurance - Health and Life			
Fixed	Regulatory Commission Expense - Rate Case	$ 20,000.00	$ 20,000.00	
Variable	Miscellaneous Expense	$ 378.00		$ 378.00
Fixed	Depreciation Expense	$ 183,876.32	$ 183,876.32	
Variable	Taxes Other Than Income	$ 2,988.00		$ 2,988.00
Fixed	Property Taxes	$ 17,301.00	$ 17,301.00	
	Cost before Taxes	$ 428,019.32	$ 270,846.32	$ 157,173.00
	Variable/Fixed %		**63.3%**	**36.7%**
Variable	Income Taxes	$ 15,935.27		$ 15,935.27
	Total Expenses before Interest	$ 443,954.59	$ 270,846.32	$ 173,108.27

Tax Calculations

Federal Taxes

15%	50000	Up to 50,000	7500
25%	25000	50,001 to 75,000	6250
34%	25000	75,001 to 100,000	8500
39%		100,001 to 335,000	91650
34%		335,001 to 10,000,000	

State Tax Rate
6.97%

Goodman Water Co

Intervenor Projection to get 9% average Returns Based on Staff Adjustments

Required Rate Decrease Calculated **8%**

Schedule - B

Initial Return to get 9% Average

	YEAR						
	1	2	3	4	5		
	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014		
Revenue	532,362	570,082	610,374	654,094	750,108		
Base Revenue at 621 customers per Adj Test Yr.	**576,464**						
Total Cost**	436,204	455,241	477,855	504,454	564,608		
Net Operating Income - After Taxes (Before Interest)	96,158	114,841	132,519	149,641	185,501		
Net Rate Base*	1,317,239	1,355,198	1,433,703	1,556,205	1,775,328		
Total Customers	621	665	712	763	875 [(a)]	7.10%	
Average Revenue per Customer	857.27	857.27	857.27	857.27	857.27		
Return on Rate Base	7.3%	8.5%	9.2%	9.6%	10.4%		
∑ of Returns	678,659						
Average Annual Return	9%						
Unused Capacity	670	626	579	528	416		
Base Addition		37,958	78,505	122,502	219,124		
Depreciation Addition		1,758	3,636	5,674	10,150		

	1,291	Total Capacity per Engineer
	578,003	Total excess capacity Rate Base remov
	26,774	Total Depreciation Removed for Exces

	Cost of Cap Adj. Excess Capacity
Revised Required Operating Income	$ 96,158.46
Operating Expenses	$ 244,143.00
Taxes	$ 8,184.70
Depreciation	$ 183,876.32
Operating Revenue	$ 532,362.48

Operating Expenses (Before Taxes & Interest)	$ 440,913.84	$ 454,687.53	$ 469,633.44	$ 502,455.85	
Interest Expense	$ 65,227.78	$ 65,227.78	$ 65,227.78	$ 65,227.78	$ 65,227.78
Income Before Taxes	$ 39,115.38	63,940.59	90,458.42	119,233.10	182,424.54
State Tax Expense	$ 2,726.34	$ 4,456.66	$ 6,304.95	$ 8,310.55	$ 12,714.99
Pre Tax Federal Income	$ 36,389.04	$ 59,483.93	$ 84,153.47	$ 110,922.55	$ 169,709.55
Federal Taxes	$ 5,458.36	$ 9,870.98	$ 16,862.18	$ 26,509.79	$ 49,436.72

* Plant and Equipment supports 825 customers

** Assume total cost per GWC Test Year Adjust w/ adjust for reasonable Prop tax and Wages, Fixed / Variable per below

[(a)] Required Compound Growth Rate in Customers to get from 621 to 872 by 2014

			Fixed	Variable
Fixed	Salaries and Wages	$ 40,000.00	$ 40,000.00	
	Purchase Water			
Variable	Purchased Power	$ 27,066.00		$ 27,066.00
	Chemicals			
Variable	Repairs and Maintenance	$ 7,746.00		$ 7,746.00
Variable	Office Supplies and Expanse	$ 14,855.00		$ 14,855.00
Variable	Outside Services	$ 102,925.00		$ 102,925.00
Variable	Water Testing	$ 1,215.00		$ 1,215.00
	Rents			
	Transportation Expenses			
Fixed	Insurance - General Liability	$ 9,669.00	$ 9,669.00	
	Insurance - Health and Life			
Fixed	Regulatory Commission Expense - Rate Case	$ 20,000.00	$ 20,000.00	
Variable	Miscellaneous Expense	$ 378.00		$ 378.00
Fixed	Depreciation Expense	$ 183,876.32	$ 183,876.32	
Variable	Taxes Other Than Income	$ 2,988.00		$ 2,988.00
Fixed	Property Taxes	$ 17,301.00	$ 17,301.00	
	Cost before Taxes	$ 428,019.32	$ 270,846.32	$ 157,173.00
	Variable/Fixed %		**63.3%**	**36.7%**
Variable	Income Taxes	$ 8,184.70		$ 8,184.70
	Total Expenses before Interest	$ 436,204.02	$ 270,846.32	$ 165,357.70

Tax Calculations

Federal Taxes

15%	50000	Up to 50,000	7500
25%	25000	50,001 to 75,000	6250
34%	25000	75,001 to 100,000	8500
39%		100,001 to 335,000	91650
34%		335,001 to 10,000,000	

State Tax Rate

6.97%

Goodman Water Co

Intervenor Projection of Actual Returns Based on 7.17% Beginning Cost of Capital after Staff Adjustments

Required Rate Decrease Calculated **8%**

Schedule - C

Average Return at 7.17% with adjusted rate base

	YEAR				
	1	2	3	4	5
	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014
Revenue	530,197	567,763	607,891	651,434	747,057
Base Revenue at 621 customers per Adj Test Yr.	**576,464**				
Total Cost**	435,751	454,541	476,896	503,303	563,288
Net Operating Income - After Taxes (Before Interest)	94,446	113,223	130,995	148,131	183,769
Net Rate Base*	1,317,239	1,355,198	1,433,703	1,556,205	1,775,328
Total Customers	621	665	712	763	875 [(a)]
Average Revenue per Customer	853.78	853.78	853.78	853.78	853.78
Return on Rate Base	7.17%	8.4%	9.1%	9.5%	10.4%
∑ of Returns	670,563				
Average Annual Return	9.02%				
Unused Capacity	670	626	579	528	416
Base Addition		37,958	78,505	122,502	219,124
Depreciation Addition		1,758	3,636	5,674	10,150

7.10%

1,291 Total Capacity per Engineer
578,003 Total excess capacity Rate Base remov
26,774 Total Depreciation Removed for Exces

	Cost of Cap Adj. Excess Capacity
Revised Required Operating Income	$ 94,446.05
Operating Expenses	$ 244,143.00
Taxes	$ 7,731.57
Depreciation	$ 183,876.32
Operating Revenue	$ 530,196.94

Operating Expenses (Before Taxes & Interest)	$ 440,913.84	$ 454,687.53	$ 469,633.44	$ 502,455.85	
Interest Expense	$ 65,227.78	$ 65,227.78	$ 65,227.78	$ 65,227.78	$ 65,227.78
Income Before Taxes	$ 36,949.84	61,621.61	87,975.55	116,572.38	179,373.26
State Tax Expense	$ 2,575.40	$ 4,295.03	$ 6,131.90	$ 8,125.09	$ 12,502.32
Pre Tax Federal Income	$ 34,374.44	$ 57,326.59	$ 81,843.66	$ 108,447.28	$ 166,870.94
Federal Taxes	$ 5,156.17	$ 9,331.65	$ 16,076.84	$ 25,544.44	$ 48,329.67

* Plant and Equipment supports 825 customers

** Assume total cost per GWC Test Year Adjust w/ adjust for reasonable Prop tax and Wages, Fixed / Variable per below

[(a)] Required Compound Growth Rate in Customers to get from 621 to 872 by 2014

			Fixed	Variable
Fixed	Salaries and Wages	$ 40,000.00	$ 40,000.00	
	Purchase Water			
Variable	Purchased Power	$ 27,066.00		$ 27,066.00
	Chemicals			
Variable	Repairs and Maintenance	$ 7,746.00		$ 7,746.00
Variable	Office Supplies and Expanse	$ 14,855.00		$ 14,855.00
Variable	Outside Services	$ 102,925.00		$ 102,925.00
Variable	Water Testing	$ 1,215.00		$ 1,215.00
	Rents			
	Transportation Expenses			
Fixed	Insurance - General Liability	$ 9,669.00	$ 9,669.00	
	Insurance - Health and Life			
Fixed	Regulatory Commission Expense - Rate Case	$ 20,000.00	$ 20,000.00	
Variable	Miscellaneous Expense	$ 378.00		$ 378.00
Fixed	Depreciation Expense	$ 183,876.32	$ 183,876.32	
Variable	Taxes Other Than Income	$ 2,988.00		$ 2,988.00
Fixed	Property Taxes	$ 17,301.00	$ 17,301.00	
	Cost before Taxes	$ 428,019.32	$ 270,846.32	$ 157,173.00
	Variable/Fixed %		**63.3%**	**36.7%**
Variable	Income Taxes	$ 7,731.57		$ 7,731.57
	Total Expenses before Interest	$ 435,750.89	$ 270,846.32	$ 164,904.57

Tax Calculations

Federal Taxes

15%	50000	Up to 50,000	7500
25%	25000	50,001 to 75,000	6250
34%	25000	75,001 to 100,000	8500
39%		100,001 to 335,000	91650
34%		335,001 to 10,000,000	

State Tax Rate

6.97%

Goodman Water Co

Intervenor Projection of Average 7.17% Returns Based on Staff Adjustments

Required Rate Decrease Calculated **14%**

Schedule - D

Average Return at 7.17% with adjusted rate base

	YEAR				
	1	2	3	4	5
	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014
Revenue	498,047	533,335	571,030	611,932	701,757
Base Revenue at 621 customers per Adj Test Yr.	**576,464**				
Total Cost**	429,024	446,604	465,383	487,930	543,695
Net Operating Income - After Taxes (Before Interest)	69,023	86,731	105,647	124,002	158,062
Net Rate Base*	1,317,239	1,355,198	1,433,703	1,556,205	1,775,328
Total Customers	621	665	712	763	875 [(a)]
Average Revenue per Customer	802.01	802.01	802.01	802.01	802.01
Return on Rate Base	5.24%	6.4%	7.4%	8.0%	8.9%
∑ of Returns	543,466				
Average Annual Return	7.31%				
Unused Capacity	670	626	579	528	416
Base Addition		37,958	78,505	122,502	219,124
Depreciation Addition		1,758	3,636	5,674	10,150

7.10%

1,291 Total Capacity per Engineer
578,003 Total excess capacity Rate Base remov
26,774 Total Depreciation Removed for Excess

	Cost of Cap Adj. Excess Capacity
Revised Required Operating Income	$ 69,023.33
Operating Expenses	$ 244,143.00
Taxes	$ 1,004.36
Depreciation	$ 183,876.32
Operating Revenue	$ 498,047.01

Operating Expenses (Before Taxes & Interest)	$ 440,913.84	$ 454,687.53	$ 469,633.44	$ 502,455.85	
Interest Expense	$ 65,227.78	$ 65,227.78	$ 65,227.78	$ 65,227.78	$ 65,227.78
Income Before Taxes	$ 4,799.91	27,193.75	51,114.44	77,070.94	134,073.44
State Tax Expense	$ 334.55	$ 1,895.40	$ 3,562.68	$ 5,371.84	$ 9,344.92
Pre Tax Federal Income	$ 4,465.36	$ 25,298.35	$ 47,551.77	$ 71,699.09	$ 124,728.52
Federal Taxes	$ 669.80	$ 3,794.75	$ 7,132.76	$ 12,924.77	$ 31,894.12

• Plant and Equipment supports 825 customers

** Assume total cost per GWC Test Year Adjust w/ adjust for reasonable Prop tax and Wages, Fixed / Variable per below

[(a)] Required Compound Growth Rate in Customers to get from 621 to 872 by 2014

			Fixed	Variable
Fixed	Salaries and Wages	$ 40,000.00	$ 40,000.00	
	Purchase Water			
Variable	Purchased Power	$ 27,066.00		$ 27,066.00
	Chemicals			
Variable	Repairs and Maintenance	$ 7,746.00		$ 7,746.00
Variable	Office Supplies and Expanse	$ 14,855.00		$ 14,855.00
Variable	Outside Services	$ 102,925.00		$ 102,925.00
Variable	Water Testing	$ 1,215.00		$ 1,215.00
	Rents			
	Transportation Expenses			
Fixed	Insurance - General Liability	$ 9,669.00	$ 9,669.00	
	Insurance - Health and Life			
Fixed	Regulatory Commission Expense - Rate Case	$ 20,000.00	$ 20,000.00	
Variable	Miscellaneous Expense	$ 378.00		$ 378.00
Fixed	Depreciation Expense	$ 183,876.32	$ 183,876.32	
Variable	Taxes Other Than Income	$ 2,988.00		$ 2,988.00
Fixed	Property Taxes	$ 17,301.00	$ 17,301.00	
	Cost before Taxes	$ 428,019.32	$ 270,846.32	$ 157,173.00
	Variable/Fixed %		**63.3%**	**36.7%**
Variable	Income Taxes	$ 1,004.36		$ 1,004.36
	Total Expenses before Interest	$ 429,023.68	$ 270,846.32	$ 158,177.36

Tax Calculations

Federal Taxes

15%	50000	Up to 50,000	7500
25%	25000	50,001 to 75,000	6250
34%	25000	75,001 to 100,000	8500
39%		100,001 to 335,000	91650
34%		335,001 to 10,000,000	

State Tax Rate

6.97%

Goodman Water Co

GWC Projection of Actual Returns Based on Staff Adjustments, 10% starting Cost of Capital

Required Rate Increase Calculated **49%**

Schedule - E

	YEAR				
	1	2	3	4	5
	12/31/2010	**12/31/2011**	**12/31/2012**	**12/31/2013**	**12/31/2014**
Revenue	857,176	917,910	982,785	1,053,181	1,207,776
Base Revenue at 621 customers per Adj Test Yr.	**576,464**				
Total Cost**	626,700	659,231	691,677	726,883	804,200
Net Operating Income - After Taxes (Before Interest)	230,476	258,678	291,108	326,297	403,576
Net Rate Base*	2,402,221	2,402,221	2,402,221	2,402,221	2,402,221
RATE BASE PER GWC					
0.10 Total Customers	621	665	712	763	875 [a]
Average Revenue per Customer	1,380.32	1,380.32	1,380.32	1,380.32	1,380.32
Return on Rate Base	10%	10.8%	12.1%	13.6%	16.8%
∑ of Returns	1,510,136				
Average Annual Return	13%				
Unused Capacity	670	626	579	528	416
Base Addition					
Depreciation Addition					

7.10%

1,291 Total Capacity per Engineer
578,003 Total excess capacity Rate Base remov
26,774 Total Depreciation Removed for Exces

Operating Expenses (Before Taxes & Interest)	$ 507,761.00	$ 519,049.16	$ 531,106.97	$ 544,190.97	$ 572,924.48
Interest Expense	$ 35,696.00	$ 35,696.00	$ 35,696.00	$ 35,696.00	$ 35,696.00
Income Before Taxes	$ 313,719.00	363,164.73	415,981.75	473,293.84	599,155.69
State Tax Expense	$ 21,866.21	$ 25,312.58	$ 28,993.93	$ 32,988.58	$ 41,761.15
Pre Tax Federal Income	$ 291,852.79	$ 337,852.14	$ 386,987.82	$ 440,305.26	$ 557,394.54
Federal Taxes	$ 97,072.59	$ 114,869.73	$ 131,575.86	$ 149,703.79	$ 189,514.14

* Plant and Equipment supports 825 customers

** Assume total cost per GWC Test Year Adjust w/ adjust for reasonable Prop tax and Wages, Fixed / Variable per below

[a] Required Compound Growth Rate in Customers to get from 621 to 872 by 2014

			Fixed	**Variable**
Fixed	Salaries and Wages	$ 40,000.00	$ 40,000.00	
	Purchase Water			
Variable	Purchased Power	$ 27,642.00		$ 27,642.00
	Chemicals			
Variable	Repairs and Maintenance	$ 7,746.00		$ 7,746.00
Variable	Office Supplies and Expanse	$ 14,855.00		$ 14,855.00
Variable	Outside Services	$ 102,925.00		$ 102,925.00
Variable	Water Testing	$ 2,783.00		$ 2,783.00
	Rents			
	Transportation Expenses			
Fixed	Insurance - General Liability	$ 9,669.00	$ 9,669.00	
	Insurance - Health and Life			
Fixed	Regulatory Commission Expense - Rate Case	$ 40,000.00	$ 40,000.00	
Variable	Miscellaneous Expense	$ 378.00		$ 378.00
Fixed	Depreciation Expense	$ 241,474.00	$ 241,474.00	
Variable	Taxes Other Than Income	$ 2,988.00		$ 2,988.00
Fixed	Property Taxes	$ 17,301.00	$ 17,301.00	
	Cost before Taxes	$ 507,761.00	$ 348,444.00	$ 159,317.00
	Variable/Fixed %		**68.6%**	**31.4%**
Variable	Income Taxes	$ 118,938.80		$ 118,938.80
	Total Expenses before Interest	$ 626,699.80	$ 348,444.00	$ 278,255.80

Tax Calculations

Federal Taxes

15%	50000	Up to 50,000	7500
25%	25000	50,001 to 75,000	6250
34%	25000	75,001 to 100,000	8500
39%		100,001 to 335,000	91650
34%		335,001 to 10,000,000	

State Tax Rate

6.97%

Goodman Water Co

GWC Projection of Actual Returns Based on Staff Adjustments - Ave 10%

Required Rate Increase Calculated **33%**

Schedule - F

	YEAR				
	1	2	3	4	5
	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014
Revenue	768,522	822,974	881,140	944,255	1,082,861
Base Revenue at 621 customers per Adj Test Yr.	**576,464**				
Total Cost**	588,355	618,313	650,313	684,838	755,982
Net Operating Income - After Taxes (Before Interest)	180,167	204,662	230,827	259,417	326,879
Net Rate Base*	2,402,221	2,402,221	2,402,221	2,402,221	2,402,221
RATE BASE PER GWC					
Total Customers	621	665	712	763	875 [(a)]
Average Revenue per Customer	1,237.56	1,237.56	1,237.56	1,237.56	1,237.56
Return on Rate Base	7.5%	8.5%	9.6%	10.8%	13.6%
∑ of Returns	1,201,951				
Average Annual Return	10.0%				
Unused Capacity	670	626	579	528	416
Base Addition					
Depreciation Addition					

	Cost of Cap Adj. Excess Capacity
Revised Required Operating Income	$ 180,166.58
Operating Expenses	$ 266,287.00
Taxes	$ 80,594.45
Depreciation	$ 241,474.00
Operating Revenue	$ 768,522.02

Operating Expenses (Before Taxes & Interest)	$ 507,761.00	$ 519,049.16	$ 531,106.97	$ 544,190.97	$ 572,924.48
Interest Expense	$ 35,696.00	$ 35,696.00	$ 35,696.00	$ 35,696.00	$ 35,696.00
Income Before Taxes	$ 225,065.02	268,229.31	314,336.61	364,367.94	474,240.67
State Tax Expense	$ 15,687.03	$ 18,695.58	$ 21,909.26	$ 25,396.45	$ 33,054.57
Pre Tax Federal Income	$ 209,377.99	$ 249,533.73	$ 292,427.35	$ 338,971.50	$ 441,186.10
Federal Taxes	$ 64,907.42	$ 80,568.15	$ 97,296.67	$ 115,250.31	$ 150,003.27

1,291 Total Capacity per Engineer
578,003 Total excess capacity Rate Base remov
26,774 Total Depreciation Removed for Excess

7.10%

* Plant and Equipment supports 825 customers

** Assume total cost per GWC Test Year Adjust w/ adjust for reasonable Prop tax and Wages, Fixed / Variable per below

[(a)] Required Compound Growth Rate in Customers to get from 621 to 872 by 2014

			Fixed	Variable
Fixed	Salaries and Wages	$ 40,000.00	$ 40,000.00	
	Purchase Water			
Variable	Purchased Power	$ 27,642.00		$ 27,642.00
	Chemicals			
Variable	Repairs and Maintenance	$ 7,746.00		$ 7,746.00
Variable	Office Supplies and Expanse	$ 14,855.00		$ 14,855.00
Variable	Outside Services	$ 102,925.00		$ 102,925.00
Variable	Water Testing	$ 2,783.00		$ 2,783.00
	Rents			
	Transportation Expenses			
Fixed	Insurance - General Liability	$ 9,669.00	$ 9,669.00	
	Insurance - Health and Life			
Fixed	Regulatory Commission Expense - Rate Case	$ 40,000.00	$ 40,000.00	
Variable	Miscellaneous Expense	$ 378.00		$ 378.00
Fixed	Depreciation Expense	$ 241,474.00	$ 241,474.00	
Variable	Taxes Other Than Income	$ 2,988.00		$ 2,988.00
Fixed	Property Taxes	$ 17,301.00	$ 17,301.00	
	Cost before Taxes	$ 507,761.00	$ 348,444.00	$ 159,317.00
	Variable/Fixed %		**68.6%**	**31.4%**
Variable	Income Taxes	$ 80,594.45		$ 80,594.45
	Total Expenses before Interest	$ 588,355.45	$ 348,444.00	$ 239,911.45

Tax Calculations

Federal Taxes

15%	50000	Up to 50,000	7500
25%	25000	50,001 to 75,000	6250
34%	25000	75,001 to 100,000	8500
39%		100,001 to 335,000	91650
34%		335,001 to 10,000,000	

State Tax Rate

6.97%

Goodman Water Co

GWC Returns required to get 9% average return on investment

Required Rate Increase Calculated **27%**

Schedule - G

	YEAR				
	1	2	3	4	5
	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014
Revenue	734,234	786,257	841,827	902,126	1,034,548
Base Revenue at 621 customers per Adj Test Yr.	**576,464**				
Total Cost**	573,525	602,432	633,309	666,815	737,334
Net Operating Income - After Taxes (Before Interest)	160,709	183,825	208,517	235,311	297,215
Net Rate Base*	2,402,221	2,402,221	2,402,221	2,402,221	2,402,221
RATE BASE PER GWC					
Total Customers	621	665	712	763	875 [a]
Average Revenue per Customer	1,182.34	1,182.34	1,182.34	1,182.34	1,182.34
Return on Rate Base	6.7%	7.7%	8.7%	9.8%	12.4%
∑ of Returns	1,085,577				
Average Annual Return	9%				
Unused Capacity	670	626	579	528	416
Base Addition					
Depreciation Addition					

7.10%

1,291 Total Capacity per Engineer
578,003 Total excess capacity Rate Base remov
26,774 Total Depreciation Removed for Exces

	Cost of Cap Adj. Excess Capacity
Revised Required Operating Income	$ 160,708.58
Operating Expenses	$ 266,287.00
Taxes	$ 65,764.20
Depreciation	$ 241,474.00
Operating Revenue	$ 734,233.79

Operating Expenses (Before Taxes & Interest)	$ 507,761.00	$ 519,049.16	$ 531,106.97	$ 544,190.97	$ 572,924.48
Interest Expense	$ 35,696.00	$ 35,696.00	$ 35,696.00	$ 35,696.00	$ 35,696.00
Income Before Taxes	$ 190,776.79	231,511.63	275,023.86	322,239.24	425,927.94
State Tax Expense	$ 13,297.14	$ 16,136.36	$ 19,169.16	$ 22,460.08	$ 29,687.18
Pre Tax Federal Income	$ 177,479.65	$ 215,375.27	$ 255,854.69	$ 299,779.17	$ 396,240.76
Federal Taxes	$ 52,467.06	$ 67,246.36	$ 83,033.33	$ 100,163.88	$ 134,721.86

* Plant and Equipment supports 825 customers

** Assume total cost per GWC Test Year Adjust w/ adjust for reasonable Prop tax and Wages, Fixed / Variable per below

[a] Required Compound Growth Rate in Customers to get from 621 to 872 by 2014

			Fixed	Variable
Fixed	Salaries and Wages	$ 40,000.00	$ 40,000.00	
	Purchase Water			
Variable	Purchased Power	$ 27,642.00		$ 27,642.00
	Chemicals			
Variable	Repairs and Maintenance	$ 7,746.00		$ 7,746.00
Variable	Office Supplies and Expanse	$ 14,855.00		$ 14,855.00
Variable	Outside Services	$ 102,925.00		$ 102,925.00
Variable	Water Testing	$ 2,783.00		$ 2,783.00
	Rents			
	Transportation Expenses			
Fixed	Insurance - General Liability	$ 9,669.00	$ 9,669.00	
	Insurance - Health and Life			
Fixed	Regulatory Commission Expense - Rate Case	$ 40,000.00	$ 40,000.00	
Variable	Miscellaneous Expense	$ 378.00		$ 378.00
Fixed	Depreciation Expense	$ 241,474.00	$ 241,474.00	
Variable	Taxes Other Than Income	$ 2,988.00		$ 2,988.00
Fixed	Property Taxes	$ 17,301.00	$ 17,301.00	
	Cost before Taxes	$ 507,761.00	$ 348,444.00	$ 159,317.00
	Variable/Fixed %		**68.6%**	**31.4%**
Variable	Income Taxes	$ 65,764.20		$ 65,764.20
	Total Expenses before Interest	$ 573,525.20	$ 348,444.00	$ 225,081.20

Tax Calculations

Federal Taxes

15%	50000	Up to 50,000	7500
25%	25000	50,001 to 75,000	6250
34%	25000	75,001 to 100,000	8500
39%		100,001 to 335,000	91650
34%		335,001 to 10,000,000	

State Tax Rate

6.97%

Goodman Water Co
ACC Projection of Actual Returns Based on Staff Adjustments
Required Rate Increase Calculated **22%**
Schedule - H

	YEAR				
	1	2	3	4	5
	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014
Revenue	700,936	750,600	803,650	861,214	987,631
Base Revenue at 621 customers per Adj Test Yr.	**576,464**				
Total Cost**	559,123	587,010	616,797	649,120	719,223
Net Operating Income - After Taxes (Before Interest)	141,813	163,590	186,852	212,095	268,408
Net Rate Base*	1,739,712	1,739,712	1,739,712	1,739,712	1,739,712
Total Customers	621	665	712	763	875 [(a)]
Average Revenue per Customer	1,128.72	1,128.72	1,128.72	1,128.72	1,128.72
Return on Rate Base	8.2%	9.4%	10.7%	12.2%	15.4%
∑ of Returns	972,757				
Average Annual Return	11%				
Unused Capacity	670	626	579	528	416
Base Addition					
Depreciation Addition					

7.10%

1,291 Total Capacity per Engineer
578,003 Total excess capacity Rate Base remov
26,774 Total Depreciation Removed for Exces

	Cost of Cap Adj. Excess Capacity
Revised Required Operating Income	$ 141,812.62
Operating Expenses	$ 266,287.00
Taxes	$ 51,362.32
Depreciation	$ 241,474.00
Operating Revenue	$ 700,935.94

Operating Expenses (Before Taxes & Interest)	$ 507,761.00	$ 519,049.16	$ 531,106.97	$ 544,190.97	$ 572,924.48
Interest Expense	$ 35,696.00	$ 35,696.00	$ 35,696.00	$ 35,696.00	$ 35,696.00
Income Before Taxes	$ 157,478.94	195,854.52	236,846.62	281,327.40	379,010.69
State Tax Expense	$ 10,976.28	$ 13,651.06	$ 16,508.21	$ 19,608.52	$ 26,417.04
Pre Tax Federal Income	$ 146,502.66	$ 182,203.46	$ 220,338.41	$ 261,718.88	$ 352,593.64
Federal Taxes	$ 40,386.04	$ 54,309.35	$ 69,181.98	$ 85,320.36	$ 119,881.84

* Plant and Equipment supports 825 customers
** Assume total cost per GWC Test Year Adjust w/ adjust for reasonable Prop tax and Wages, Fixed / Variable per below
[(a)] Required Compound Growth Rate in Customers to get from 621 to 872 by 2014

			Fixed	Variable
Fixed	Salaries and Wages	$ 40,000.00	$ 40,000.00	
	Purchase Water			
Variable	Purchased Power	$ 27,642.00		$ 27,642.00
	Chemicals			
Variable	Repairs and Maintenance	$ 7,746.00		$ 7,746.00
Variable	Office Supplies and Expanse	$ 14,855.00		$ 14,855.00
Variable	Outside Services	$ 102,925.00		$ 102,925.00
Variable	Water Testing	$ 2,783.00		$ 2,783.00
	Rents			
	Transportation Expenses			
Fixed	Insurance - General Liability	$ 9,669.00	$ 9,669.00	
	Insurance - Health and Life			
Fixed	Regulatory Commission Expense - Rate Case	$ 40,000.00	$ 40,000.00	
Variable	Miscellaneous Expense	$ 378.00		$ 378.00
Fixed	Depreciation Expense	$ 241,474.00	$ 241,474.00	
Variable	Taxes Other Than Income	$ 2,988.00		$ 2,988.00
Fixed	Property Taxes	$ 17,301.00	$ 17,301.00	
	Cost before Taxes	$ 507,761.00	$ 348,444.00	$ 159,317.00
	Variable/Fixed %		**68.6%**	**31.4%**
Variable	Income Taxes	$ 51,362.32		$ 51,362.32
	Total Expenses before Interest	$ 559,123.32	$ 348,444.00	$ 210,679.32

Tax Calculations

Federal Taxes

15%	50000	Up to 50,000	7500
25%	25000	50,001 to 75,000	6250
34%	25000	75,001 to 100,000	8500
39%		100,001 to 335,000	91650
34%		335,001 to 10,000,000	

State Tax Rate
6.97%

Goodman Water Co

ACC Projection of Actual Returns Based on Staff Adjustments and 9% Average Return

Required Rate Increase Calculated **10%**

Schedule - I

	YEAR				
	1	2	3	4	5
	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014
Revenue	636,188	681,264	729,414	781,661	896,400
Base Revenue at 621 customers per Adj Test Yr.	**576,464**				
Total Cost**	531,805	557,021	584,689	614,712	680,644
Net Operating Income - After Taxes (Before Interest)	104,383	124,243	144,725	166,949	215,756
Net Rate Base*	1,739,712	1,739,712	1,739,712	1,739,712	1,739,712
Total Customers	621	665	712	763	875 [a]
Average Revenue per Customer	1,024.46	1,024.46	1,024.46	1,024.46	1,024.46
Return on Rate Base	6.0%	7.1%	8.3%	9.6%	12.4%
∑ of Returns	756,057				
Average Annual Return	9%				
Unused Capacity	670	626	579	528	416
Base Addition					
Depreciation Addition					

7.10%

1,291 Total Capacity per Engineer
578,003 Total excess capacity Rate Base remov
26,774 Total Depreciation Removed for Exces

	Cost of Cap Adj. Excess Capacity
Revised Required Operating Income	$ 104,382.72
Operating Expenses	$ 266,287.00
Taxes	$ 24,044.40
Depreciation	$ 241,474.00
Operating Revenue	$ 636,188.12

Operating Expenses (Before Taxes & Interest)	$ 507,761.00	$ 519,049.16	$ 531,106.97	$ 544,190.97	$ 572,924.48
Interest Expense	$ 35,696.00	$ 35,696.00	$ 35,696.00	$ 35,696.00	$ 35,696.00
Income Before Taxes	$ 92,731.12	126,519.09	162,610.78	201,774.11	287,779.85
State Tax Expense	$ 6,463.36	$ 8,818.38	$ 11,333.97	$ 14,063.66	$ 20,058.26
Pre Tax Federal Income	$ 86,267.76	$ 117,700.71	$ 151,276.81	$ 187,710.45	$ 267,721.59
Federal Taxes	$ 17,581.04	$ 29,153.28	$ 42,247.96	$ 56,457.08	$ 87,661.42

* Plant and Equipment supports 825 customers

** Assume total cost per GWC Test Year Adjust w/ adjust for reasonable Prop tax and Wages, Fixed / Variable per below

[a] Required Compound Growth Rate in Customers to get from 621 to 872 by 2014

			Fixed	Variable
Fixed	Salaries and Wages	$ 40,000.00	$ 40,000.00	
	Purchase Water			
Variable	Purchased Power	$ 27,642.00		$ 27,642.00
	Chemicals			
Variable	Repairs and Maintenance	$ 7,746.00		$ 7,746.00
Variable	Office Supplies and Expanse	$ 14,855.00		$ 14,855.00
Variable	Outside Services	$ 102,925.00		$ 102,925.00
Variable	Water Testing	$ 2,783.00		$ 2,783.00
	Rents			
	Transportation Expenses			
Fixed	Insurance - General Liability	$ 9,669.00	$ 9,669.00	
	Insurance - Health and Life			
Fixed	Regulatory Commission Expense - Rate Case	$ 40,000.00	$ 40,000.00	
Variable	Miscellaneous Expense	$ 378.00		$ 378.00
Fixed	Depreciation Expense	$ 241,474.00	$ 241,474.00	
Variable	Taxes Other Than Income	$ 2,988.00		$ 2,988.00
Fixed	Property Taxes	$ 17,301.00	$ 17,301.00	
	Cost before Taxes	$ 507,761.00	$ 348,444.00	$ 159,317.00
	Variable/Fixed %		**68.6%**	**31.4%**
Variable	Income Taxes	$ 24,044.40		$ 24,044.40
	Total Expenses before Interest	$ 531,805.40	$ 348,444.00	$ 183,361.40

Tax Calculations

Federal Taxes

15%	50000	Up to 50,000	7500
25%	25000	50,001 to 75,000	6250
34%	25000	75,001 to 100,000	8500
39%		100,001 to 335,000	91650
34%		335,001 to 10,000,000	

State Tax Rate

6.97%

Goodman Water Co

RUCCO Projection of Actual Returns Based on RUCCO Adjustments and 7.85% cost of Capital

Required Rate Increase Calculated **-6%**

Schedule - J

	YEAR				
	1	2	3	4	5
	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014
Revenue	544,111	582,663	623,844	668,529	766,662
Base Revenue at 621 customers per Adj Test Yr.	**576,464**				
Total Cost**	408,357	431,230	455,663	482,175	540,397
Net Operating Income - After Taxes (Before Interest)	135,754	151,433	168,181	186,355	226,266
Net Rate Base*	1,729,190	1,729,190	1,729,190	1,729,190	1,729,190
Total Customers	621	665	712	763	875 [(a)]
Average Revenue per Customer	876.19	876.19	876.19	876.19	876.19
Return on Rate Base	7.85%	8.8%	9.7%	10.8%	13.1%
∑ of Returns	867,988				
Average Annual Return	10%				
Unused Capacity	670	626	579	528	416
Base Addition					
Depreciation Addition					

7.10%	
1,291	Total Capacity per Engineer
578,003	Total excess capacity Rate Base remov
26,774	Total Depreciation Removed for Exces

	Cost of Cap Adj. Excess Capacity
Revised Required Operating Income	$ 135,753.52
Operating Expenses	$ 237,105.00
Taxes	$ 41,651.47
Depreciation	$ 129,601.00
Operating Revenue	$ 544,110.99

Operating Expenses (Before Taxes & Interest)	$ 366,706.00	$ 377,628.70	$ 389,296.13	$ 401,956.53	$ 429,759.76
Interest Expense	$ 42,378.00	$ 42,378.00	$ 42,378.00	$ 42,378.00	$ 42,378.00
Income Before Taxes	$ 135,026.99	162,656.43	192,169.71	224,194.75	294,524.26
State Tax Expense	$ 9,411.38	$ 11,337.15	$ 13,394.23	$ 15,626.37	$ 20,528.34
Pre Tax Federal Income	$ 125,615.61	$ 151,319.28	$ 178,775.48	$ 208,568.38	$ 273,995.92
Federal Taxes	$ 32,240.09	$ 42,264.52	$ 52,972.44	$ 64,591.67	$ 90,108.41

• Plant and Equipment supports 825 customers

** Assume total cost per GWC Test Year Adjust w/ adjust for reasonable Prop tax and Wages, Fixed / Variable per below

[(a)] Required Compound Growth Rate in Customers to get from 621 to 872 by 2014

			Fixed	Variable
Fixed	Salaries and Wages	$ 35,014.00	$ 35,014.00	
	Purchase Water			
Variable	Purchased Power	$ 27,066.00		$ 27,066.00
	Chemicals			
Variable	Repairs and Maintenance	$ 7,746.00		$ 7,746.00
Variable	Office Supplies and Expanse	$ 14,855.00		$ 14,855.00
Variable	Outside Services	$ 100,284.00		$ 100,284.00
Variable	Water Testing	$ 1,215.00		$ 1,215.00
	Rents			
	Transportation Expenses			
Fixed	Insurance - General Liability	$ 9,669.00	$ 9,669.00	
	Insurance - Health and Life			
Fixed	Regulatory Commission Expense - Rate Case	$ 20,000.00	$ 20,000.00	
Variable	Miscellaneous Expense	$ 378.00		$ 378.00
Fixed	Depreciation Expense	$ 129,601.00	$ 129,601.00	
Variable	Taxes Other Than Income	$ 2,615.00		$ 2,615.00
Fixed	Property Taxes	$ 18,263.00	$ 18,263.00	
	Cost before Taxes	$ 366,706.00	$ 212,547.00	$ 154,159.00
	Variable/Fixed %		**58.0%**	**42.0%**
Variable	Income Taxes	$ 41,651.47		$ 41,651.47
	Total Expenses before Interest	$ 408,357.47	$ 212,547.00	$ 195,810.47

Tax Calculations

Federal Taxes

15%	50000	Up to 50,000	7500
25%	25000	50,001 to 75,000	6250
34%	25000	75,001 to 100,000	8500
39%		100,001 to 335,000	91650
34%		335,001 to 10,000,000	

State Tax Rate

6.97%

Goodman Water Co
RUCCO Projection of Actual Returns Based on Average 7.85% Return
Required Rate Increase Calculated **-15%**

Schedule - K

	YEAR				
	1	2	3	4	5
	12/31/2010	**12/31/2011**	**12/31/2012**	**12/31/2013**	**12/31/2014**
Revenue	487,650	522,201	559,109	599,157	687,107
Base Revenue at 621 customers per Adj Test Yr.	**576,464**				
Total Cost**	385,454	405,326	427,664	452,170	505,988
Net Operating Income - After Taxes (Before Interest)	102,195	116,875	131,445	146,987	181,119
Net Rate Base*	1,729,190	1,729,190	1,729,190	1,729,190	1,729,190
Total Customers	621	665	712	763	875 [a]
Average Revenue per Customer	785.26	785.26	785.26	785.26	785.26
Return on Rate Base	5.91%	6.8%	7.6%	8.5%	10.5%
∑ of Returns	678,622				
Average Annual Return	7.85%				
Unused Capacity	670	626	579	528	416
Base Addition					
Depreciation Addition					

7.10%

1,291 Total Capacity per Engineer
578,003 Total excess capacity Rate Base removed
26,774 Total Depreciation Removed for Excess C

	Cost of Cap Adj. Excess Capacity
Revised Required Operating Income	$ 102,195.13
Operating Expenses	$ 237,105.00
Taxes	$ 18,748.39
Depreciation	$ 129,601.00
Operating Revenue	$ 487,649.52

Operating Expenses (Before Taxes & Interest)	$ 366,706.00	$ 377,628.70	$ 389,296.13	$ 401,956.53	$ 429,759.76
Interest Expense	$ 42,378.00	$ 42,378.00	$ 42,378.00	$ 42,378.00	$ 42,378.00
Income Before Taxes	$ 78,565.52	102,194.48	127,434.50	154,822.61	214,969.05
State Tax Expense	$ 5,476.02	$ 7,122.96	$ 8,882.18	$ 10,791.14	$ 14,983.34
Pre Tax Federal Income	$ 73,089.51	$ 95,071.53	$ 118,552.32	$ 144,031.48	$ 199,985.71
Federal Taxes	$ 13,272.38	$ 20,574.32	$ 29,485.40	$ 39,422.28	$ 61,244.43

* Plant and Equipment supports 825 customers
** Assume total cost per GWC Test Year Adjust w/ adjust for reasonable Prop tax and Wages, Fixed / Variable per below
[a] Required Compound Growth Rate in Customers to get from 621 to 872 by 2014

			Fixed	**Variable**
Fixed	Salaries and Wages	$ 35,014.00	$ 35,014.00	
	Purchase Water			
Variable	Purchased Power	$ 27,066.00		$ 27,066.00
	Chemicals			
Variable	Repairs and Maintenance	$ 7,746.00		$ 7,746.00
Variable	Office Supplies and Expanse	$ 14,855.00		$ 14,855.00
Variable	Outside Services	$ 100,284.00		$ 100,284.00
Variable	Water Testing	$ 1,215.00		$ 1,215.00
	Rents			
	Transportation Expenses			
Fixed	Insurance - General Liability	$ 9,669.00	$ 9,669.00	
	Insurance - Health and Life			
Fixed	Regulatory Commission Expense - Rate Case	$ 20,000.00	$ 20,000.00	
Variable	Miscellaneous Expense	$ 378.00		$ 378.00
Fixed	Depreciation Expense	$ 129,601.00	$ 129,601.00	
Variable	Taxes Other Than Income	$ 2,615.00		$ 2,615.00
Fixed	Property Taxes	$ 18,263.00	$ 18,263.00	
	Cost before Taxes	$ 366,706.00	$ 212,547.00	$ 154,159.00
	Variable/Fixed %		**58.0%**	**42.0%**
Variable	Income Taxes	$ 18,748.39		$ 18,748.39
	Total Expenses before Interest	$ 385,454.39	$ 212,547.00	$ 172,907.39

Tax Calculations

Federal Taxes

15%	50000	Up to 50,000	7500
25%	25000	50,001 to 75,000	6250
34%	25000	75,001 to 100,000	8500
39%		100,001 to 335,000	91650
34%		335,001 to 10,000,000	

State Tax Rate
6.97%

Intervenors
Recalculation of Return on Equity Requirement
(As of GWC Intervenor Surrebuttal Date)
Schedule - L

Calculation of the Cost of Equity

	Results [1]		
Method	**Low**	**High**	**Average**
DCF (Water Sample)		9.09%	9.09%
DCF (Natuarl Gas Sample)		9.31%	9.31%
CAPM (Water Sample)	5.35%	6.64%	6.00%
CAPM (Natural Gas)	5.10%	6.29%	5.70%
Total			7.52%
Company Specific Risk Premium			0.50%
Total Company Equity Return Requirement			8.02%

[1] Results from RUCO rate calculations

Goodman Water Company
Required Return

	Current Equity	Proportion	Interest Rate	Goodman Water Requested Return	Adjusted Proportion	Interest Rate		Adjusted Equity	Interest
Long Term Debt, 1st Issue	$ 507,451.00	18.32%	8.50%	1.56%	18.32%	8.50%	1.56%	$ 507,451.00	$ 43,133.34
Long Term Debt, 2nd Issue		0.00%			21.68%	3.68%	0.80%	$ 600,392.48	$ 22,094.44
Common Equity	$ 2,261,887.00	81.68%	11.00%	8.98%	60.00%	8.02%	4.81%	$ 1,661,602.80	
	$ 2,769,338.00			10.54%	100.00%		7.17%	$ 2,769,446.28	$ 65,227.78
				(a)			(b)		

Current Rate Base	$ 2,397,419.00	(d)
Proposed required income	$ 252,687.96	= (a) X (d)
Proposed required revenue	$ 2,865,453.45	
Adjusted Rate Base	$ 1,895,242.36	(e)
Less Unused Phase IVB, IVC, V, Future Planned, Unplanned	$ 578,003.18	
Net Adjusted Rate Base	$ 1,317,239.17	(f)

Intervenors

Recalculation of Rate Base

132676.6

(As of GWC Intervenor Surrebuttal Date)

Schedule - M

Explain better what you're doing here.

Calculation of Adjusted Rate Base

		Phase	Year	Acct	Description	Cost	AIAC	% AIAC	Total 2008 Land Additions	Land After Staff Adjustment	Phase IV, V Apportionment	Calculation of Depreciation Adjustment	Depr. Rate
Bourassa Calculated Fair Value Rate Base (Sched A-1, P-1)	$ 2,397,419	IV	2008	303	Land and Land Rights	$165,000		0.00%	$494,159	$124,659	$41,624	$0.00	0.00%
Staff Adjustment for GWC "Error" in including ECR-West capacity [3]	$ 132,677	IV	2008	304	Structure & Improv.	$171,506		0.00%			$171,506	$5,711.15	3.33%
		IV	2008	330	Dist. Reserv. & Standpipe	$470,080		0.00%			$470,080	$10,435.78	2.22%
Staff Adjustment for GWC Non-Arms Length Purchase of Land	$ 369,500	IV	2007	330	Dist. Reserv. & Standpipe	$72,350		0.00%			$72,350	$1,606.17	2.22%
		IV	2008	331	Trans. and Dist. Mains	$685,094	$685,094	100.00%				$13,701.88	2.00%
Sub-Total	$ 1,895,242	IV	2008	333	Services	$143,352	$143,352	100.00%				$4,773.62	3.33%
		IV	2008	335	Hydrants	$43,206	$43,205	100.00%				$864.12	2.00%
Excess Capacity Adjustment (Phase IVB, IVC, V, Future Planned, Unplanned) [2]	$ 578,003	V	2009	331	Trans. and Dist. Mains	$174,756	$174,756	100.00%				$3,495.12	2.00%
		V	2009	333	Services	$97,051	$97,051	100.00%				$3,231.80	3.33%
Net Fair Value Rate Base [1]	$ 1,317,239	V	2009	335	Hydrants	$35,352	$35,352	100.00%				$707.04	2.00%
					Total	$2,057,747	$1,178,810	$878,937			$755,560	$44,526.68	
					Per Previous Excess Capacity Calc	0.858	0.858						
						$1,765,546.93	$1,011,418.98	$754,127.95	Bourassa Adjustement				
								$754,127.95	ok				

Notes

[1] (85.0%(Prior Unused Capacity) x 90% (Gives 10% for growth) X Phase IV, V Apportionment i.e. .858 x 90%

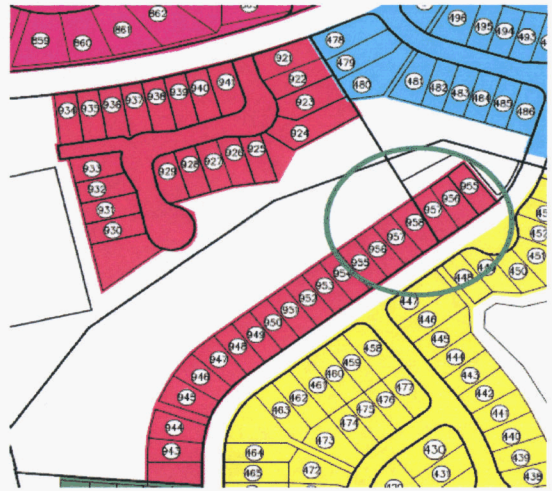
[2] See Goodman Water Company Capacity Unused analysis

[3] ((ECR West Capacity per Shiner / total capacity times cost of tank) = 190000/530000 X 370,098, since I adjust rest of excess capacity below)

Intervenor Analysis
Schedule N
Goodman Water Company Capacity Unused
(As of 2/20/22)

	Phase	Date of Approval	Lots Included Lot Start	Lot End	Sub Tot	Total Lots	Lots/Capcity Used	% Cap Used	Unused Capacity	
	I	May-02	1	218		218	218	100.0%	0.0%	
	II	June-03	219	377		159	159	100.0%	0.0%	
	III	April-04	378	477		100	100	100.0%	0.0%	
	IV-A	5/2/07 Certification of Approval of Construction, 1/22/07 delivery of service	478	590		113	95	84.1%	15.9%	18
		SUBTOTAL				***590***	***572***	***96.9%***	***3.1%***	
Plant Added	IV-B	5/2/07 Certification of Approval of Construction, 1/22/07 delivery of service	591	617		27	24	88.9%	11.1%	
Plant Added	IV-C - Enclave		618	718		101	57	56.4%	43.6%	
Plant Added	V	March-08	719	920		202	24	11.9%	88.1%	
Plant Added	Future Phase		921	961		41	0	0.0%	100.0%	
Plant Added	Unplanned Capacity		330			330	0	0.0%	100.0%	
	Subtotal, Phase IVB, IVC, V, Future and Unplanned Capacity					**701**	**105**	**15.0%**	**85.0%**	At 1291 Units
	Subtotal, Phase IV (Enclave only), V, Future and Unplanned Capacity					**674**	**81**	**12.0%**	**88.0%**	

Total Capcity per Engineer **1291**



Goodman Water Co

Intervenor Projection of Actual Returns Based on based on Average over the rate period

Schedule - O

	Rate Requestor / Intervenor	Rate Base Year 1	Rate Base Year 5 (2014)	Starting Return on Rate Base	Ending Return on Rate Base	Average Return	Test Year Revenue Increase (Decrease) %	
	Goodman Water Co. @ Current Request	2,402,221	2,402,221	10%	17%	13%	49%	Rate Base Issues, Intergenerational Inequity Issues, Average Rate Issues
1.)	Intervenor Schoemperlen @ 9% Yr-1 Return	1,317,239	1,775,328	9%	12%	11%	-2%	Rate base varies to solve intergenerational rate issue. Ending rate base is above both ACC and RUCO. Average Return Issues.
	Goodman Water Co. @ 10% Average Return	2,402,221	2,402,221	8%	14%	10%	33%	Rate Base Issues, Intergenerational Inequity Issues,
2.)	Intervenor RUCCO at 7.85% Starting Return	1,729,190	1,729,190	8%	13%	10%	-6%	Rate base resolved, Intergenerational Inequity Issues, Average Rate Issues
	Goodman Water Co. @ 9% Average Return	2,402,221	2,402,221	7%	12%	9%	27%	Rate Base Issues, Intergenerational Inequity Issues, Average Rate Resolved
3.)	Goodman Water Co. @ 9% Average Return ACC RATE BASE	1,739,712	1,739,712	7%	13%	9%	14%	Rate Base Resolved, Intergenerational Inequity Issues, Average Return @9%. Return on rate base issue.
4.)	ACC @ 9% Average Return	1,739,712	1,739,712	6%	12%	9%	10%	Rate Base Resolved, Intergenerational Inequity Issues, Average Return @9%. Return on rate base issue.
5.)	Intervenor Schoemperlen @ 9% Average Return	1,317,239	1,775,328	7%	10%	9%	-8%	Rate base varies to solve intergenerational rate issue. Ending rate base is above both ACC and RUCO. Average Return Issue @9%. Return on rate base issue.
6.)	Intervenor RUCCO at 7.85% Average Return	1,729,190	1,729,190	6%	10%	7.85%	-15%	Rate Base Resolved, Intergenartional Inequity Issues, Return on rate base resolved.
7.)	Intervenor Schoemperlen @ 7.17% Average Return	1,317,239	1,775,328	5%	9%	7%	-14%	Rate base varies to solve intergenerational rate issue. Ending rate base is above both ACC and RUCO. **Return at Equity Rate calculated resolved**. Return on rate resolved.

RED NUMBERS GWC AT THEIR REQUESTED RATE BASE

Ref# above **Conclusions:**

1.) **Intervenor Schoemperlen with return on rate base set for 9% for year one, rate base set to solve intergenerational rate issue. Rate base at end of rate period is higher than both RUCO and ACC. Average return to GWC is 11%, results in 2% reduction in test year revenue. Average return is above 9%.**

2.) **Intervenor RUCO @7.85% Year - 1 return on on rate base shows a 6% reduction in test year revenue. Average return to GWC would be 10% over rate period. Average return above 9%.**

3.) **GWC at ACC rate base with 9% average return would show a 14% increase in revenue requirement from Base. Intergenerational rate issue not resolved.**

4.) **ACC calulations at a 9% AVERAGE RETURN over rate period would require a 10% increase in base period revenue. Does not resolve intergenerational rate inequity issue.**

5.) **Intervenor Schoemperlen @9% Average Return over the period would result in a 8% reduction in test year revenue**

6.) **Intervenor RUCO @7.85% Average Return results in 15% reduction in test year revenue. Still have intergenerational rate inequity issue.**

7.) **Intervenor Schoemperlen with AVERAGE return set at required calculated return. Intergenerational rate inequity resolved.**

The amount and detail of needed data vary, depending on the local situation. The most accurate projections result from separately summarizing and analyzing billing data for each customer classification. For metered accounts, the utility may need to compile the number of bills rendered by customer class and meter size, and the water sales by rate block. This compilation usually includes adjustments for credits, additional billings, partial bills, final bills, and changes in the number of customers served. The compilation should include a verification procedure, such as a comparison with billed revenues. The verification procedure also should include a check on the days billed. A change in the billing cycle or in the makeup of the billing routes could result in test-year billings for more or less than 365 days. To properly analyze a bill, the utility must have billings for 365 days.

Flat-rate revenues and fire-service revenues can be annualized by establishing the average number of billing units for each rate level during the historical base year. Growth projections can be added if applicable.

In many situations, particularly for smaller utilities, detailed billing data are not available. In such cases, the utility must estimate a satisfactory basis for projection of anticipated revenues.

Projection Considerations

Reasonable projections of each revenue category listed in Table 2-1 must be considered and made as appropriate. As previously noted, it is often necessary to normalize or adjust historical data to reflect abnormal conditions that may have caused unusual variations. Some of the most common areas for adjustment are discussed below. For a more detailed discussion of revenue forecasting methodologies and issues, the reader should consult the publication *Forecasting Urban Water Demand* (AWWA 1996) or other texts on this subject.

Growth in number of customers. Growth in the number of customers served can be projected by recognizing historical growth patterns, growth restrictions, and changes in economic conditions, and by being aware of proposed developments in the service area. Historical customer class average water use and/or revenues per customer normally are adequate to project revenues in growth situations. However, if the current rates have not been in effect for a sufficient period to establish a valid average revenue per customer, historical average revenues need to be adjusted to reflect rate changes. Also, it often is necessary to perform special analyses of projected future revenues from existing or new industrial or other large-use customers.

The number of customers served at any particular point in time, such as historical year end, needs to be annualized so that projections ultimately can reflect a full year's service. Often the trend in average of beginning and end of year number of customers of record provides a satisfactory method of projection. A factor that would require adjustments includes the effects of past annexation of new customers, an occurrence not likely to be repeated with regularity. Another factor that would necessitate an adjustment would be the effects of a major area-wide economic downturn or upturn that is not typical of a long-term trend.

Non-recurring sales. Sales not expected to continue in the future should be eliminated from projections. This would include a large water user going off the system, abnormally high sales caused by an incorrect meter reading if not credited during the base year, leakage of customers' plumbing, and temporary purchases. Sufficient data must be accumulated to calculate the volume of non-recurring sales and appropriate adjustment made to revenue projections.